

SEQListing.txt  
SEQUENCE LISTING

<110> OLMARKER, Kjell  
<120> NOVEL OF CYTOKINE INHIBITORS  
<130> 1003301-000175  
<140> 10/506,543  
<141> 2004-10-13  
<150> PCT/SE03/00347  
<151> 2003-03-04  
<150> 10/092,919  
<151> 2002-03-08  
<160> 102  
<170> PatentIn version 2.1  
<210> 1  
<211> 25  
<212> PRT  
<213> Artificial sequence  
<220>  
<221> MOD\_RES  
<222> (1)  
<223> ACETYLATION  
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<221> PEPTIDE  
<222> (1)  
<223> Amino acid 1 is Xaa wherein Xaa = Glu or no amino acid.  
<220>  
<221> PEPTIDE  
<222> (2)  
<223> Amino acid 2 is Xaa wherein Xaa = Ala or no amino acid.  
<220>  
<221> PEPTIDE  
<222> (5)  
<223> Amino acid 5 is Xaa wherein Xaa = Cys or Ala.  
<220>  
<221> PEPTIDE  
<222> (7)  
<223> Amino acid 7 is Xaa wherein Xaa = Gln or Lys.  
<220>  
<221> PEPTIDE  
<222> (11)  
<223> Amino acid 11 is Xaa wherein Xaa = Asn or Asp.  
<220>  
<221> PEPTIDE  
<222> (17)..(25)  
<223> Amino acids 17 25 are Xaa wherein Xaa = Gly, Pro, Pro, Val, Ser, Cys, Ile, Lys, Arg

# SEQListing.txt

<220>  
 <221> MOD\_RES  
 <222> (25)  
 <223> AMIDATION

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to modification of the sequence consisting of aa 16 40 in human lactoferrin

<400> 1

Xaa Xaa Thr Lys Xaa Phe Xaa Trp Gln Arg Xaa Met Arg Lys Val Arg  
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 20 25

<210> 2  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
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 <223> ACETYLATION

<220>  
 <221> MOD\_RES  
 <222> (25)  
 <223> AMIDATION

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 16 40 in human lactoferrin

<400> 2

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10 15

Gly Pro Pro Val Ser Cys Ile Lys Arg  
 20 25

<210> 3  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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 <222> (1)  
 <223> ACETYLATION

<220>  
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 <222> (25)  
 <223> AMIDATION

# SEQListing.txt

<220>  
 <221> DISULFID  
 <222> (5)..(22)

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 16 40 in human lactoferrin

<400> 3  
 Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10 15  
 Gly Pro Pro Val Ser Cys Ile Lys Arg  
 20 25

<210> 4  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<220>  
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 <222> (23)..(23)  
 <223> AMIDATION

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 40 in human lactoferrin

<400> 4  
 Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg Gly Pro  
 1 5 10 15  
 Pro Val Ser Cys Ile Lys Arg  
 20

<210> 5  
 <211> 23  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<220>  
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# SEQListing.txt

<223> AMIDATION

<220>

<221> DISULFID

<222> (3)..(20)

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 40 in human lactoferrin

<400> 5

Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg Gly Pro  
1 5 10 15

Pro Val Ser Cys Ile Lys Arg  
20

<210> 6

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 6

Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg  
1 5 10

<210> 7

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

# SEQListing.txt

<220>  
 <221> BINDING  
 <222> (5)..(9)  
 <223> LACTAM

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of aa 18 31 in human lactoferrin; a lactam is formed between aa 5 and 9

<400> 7  
 Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg  
     1                    5                    10

<210> 8  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 12 31 of the protein human lactoferrin

<400> 8  
 Val Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met  
     1                    5                    10                    15  
 Arg Lys Val Arg  
                     20

<210> 9  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 12 18 of the protein human lactoferrin

<400> 9  
 Val Ser Gln Pro Glu Ala Thr  
     1                    5

<210> 10  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the  
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amino acids in positions 13 19 of the protein  
human lactoferrin

<400> 10  
Ser Gln Pro Glu Ala Thr Lys  
1 5

<210> 11  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 14 20 of the protein  
human lactoferrin

<400> 11  
Gln Pro Glu Ala Thr Lys Cys  
1 5

<210> 12  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 15 21 of the protein  
human lactoferrin

<400> 12  
Pro Glu Ala Thr Lys Cys Phe  
1 5

<210> 13  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 16 22 of the protein  
human lactoferrin

<400> 13  
Glu Ala Thr Lys Cys Phe Gln  
1 5

<210> 14  
<211> 7

# SEQListing.txt

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 17 23 of the protein human lactoferrin

<400> 14

Ala Thr Lys Cys Phe Gln Trp  
1 5

<210> 15

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 18 24 of the protein human lactoferrin

<400> 15

Thr Lys Cys Phe Gln Trp Gln  
1 5

<210> 16

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 19 25 of the protein human lactoferrin

<400> 16

Lys Cys Phe Gln Trp Gln Arg  
1 5

<210> 17

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 20 26 of the protein human lactoferrin

<400> 17

Cys Phe Gln Trp Gln Arg Asn  
1 5

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<210> 18  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 21 27 of the protein  
human lactoferrin

<400> 18  
Phe Gln Trp Gln Arg Asn Met  
1 5

<210> 19  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 22 28 of the protein  
human lactoferrin

<400> 19  
Gln Trp Gln Arg Asn Met Arg  
1 5

<210> 20  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 23 29 of the protein  
human lactoferrin

<400> 20  
Trp Gln Arg Asn Met Arg Lys  
1 5

<210> 21  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
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amino acids in positions 24 30 of the protein  
human lactoferrin

<400> 21  
Gln Arg Asn Met Arg Lys Val  
1 5

<210> 22  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 25 31 of the protein  
human lactoferrin

<400> 22  
Arg Asn Met Arg Lys Val Arg  
1 5

<210> 23  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 16 23 of the protein  
human lactoferrin

<400> 23  
Glu Ala Thr Lys Cys Phe Gln Trp  
1 5

<210> 24  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of  
natural or artificial origin consisting of the  
amino acids in positions 16 24 of the protein  
human lactoferrin

<400> 24  
Glu Ala Thr Lys Cys Phe Gln Trp Gln  
1 5

<210> 25  
<211> 10  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 25 of the protein human lactoferrin

<400> 25

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg  
1 5 10

<210> 26

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 26 of the protein human lactoferrin

<400> 26

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn  
1 5 10

<210> 27

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 27 of the protein human lactoferrin

<400> 27

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met  
1 5 10

<210> 28

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 28 of the protein human lactoferrin

<400> 28

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg  
1 5 10

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<210> 29  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 29 of the protein human lactoferrin

<400> 29  
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys  
1 5 10

<210> 30  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 30 of the protein human lactoferrin

<400> 30  
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val  
1 5 10 15

<210> 31  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 31 of the protein human lactoferrin

<400> 31  
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10 15

<210> 32  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 13 31 of the protein

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human lactoferrin

<400> 32

Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg  
1 5 10 15

Lys Val Arg

<210> 33

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 14 31 of the protein human lactoferrin

<400> 33

Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys  
1 5 10 15

Val Arg

<210> 34

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 15 31 of the protein human lactoferrin

<400> 34

Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val  
1 5 10 15

Arg

<210> 35

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 17 31 of the protein human lactoferrin!

<400> 35

Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10 15

<210> 36  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of  
 natural or artificial origin consisting of the  
 amino acids in positions 18 31 of the protein  
 human lactoferrin

<400> 36  
 Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 37  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of  
 natural or artificial origin consisting of the  
 amino acids in positions 19 31 of the protein  
 human lactoferrin

<400> 37  
 Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 38  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Peptide of  
 natural or artificial origin consisting of the  
 amino acids in positions 20 31 of the protein  
 human lactoferrin

<400> 38  
 Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 39  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 21 31 of the protein human lactoferrin

<400> 39  
Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 40  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 22 31 of the protein human lactoferrin

<400> 40  
Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 41  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 23 31 of the protein human lactoferrin

<400> 41  
Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5

<210> 42  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 24 31 of the protein human lactoferrin

<400> 42  
Gln Arg Asn Met Arg Lys Val Arg  
1 5

<210> 43

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<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<221> PEPTIDE

<222> (2)..(10)
<223> Amino acids 2, 4, 6 and 10 are Xaa wherein Xaa = Gln, Lys,
      Asp, Asn or Val.

<220>
<223> Description of Artificial Sequence: of natural or
      artificial origin, corresponding to a modification
      of the sequence consisting of amino acids 21 31 in
      human lactoferrin

<400> 43
Phe Xaa Trp Xaa Arg Xaa Met Arg Lys Xaa Arg
  1             5             10

<210> 44
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or
      artificial origin, corresponding to the sequence
      consisting of amino acids 21 31 in human
      lactoferrin

<400> 44
Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
  1             5             10

<210> 45
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or
      artificial origin, corresponding to the sequence
      consisting of aa 21 31 in human lactoferrin
      wherein one aa has been substituted

<400> 45
Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
  1             5             10

<210> 46
<211> 12
<212> PRT
<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin

wherein one aa has been substituted

<400> 46

Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 47

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD\_RES

<222> (12)

<223> AMIDATION

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 47

Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 48

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 19 31 in human lactoferrin wherein one aa has been substituted

<400> 48

Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 49

<211> 13

<212> PRT

<213> Artificial Sequence

<220>



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<221> MOD\_RES  
<222> (1)  
<223> ACETYLATION

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 19 31 in human lactoferrin  
wherein one aa has been modified

<400> 49  
Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 50  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 18 31 in human lactoferrin  
wherein one aa has been substituted

<400> 50  
Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 51  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)  
<223> ACETYLATION

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 18 31 in human lactoferrin  
wherein one aa has been substituted

SEQListing.txt

<400> 51  
 Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
     1                    5                    10

<210> 52  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to a modification  
 of the sequence consisting of amino acids 18 31 in  
 human lactoferrin

<400> 52  
 Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg  
     1                    5                    10

<210> 53  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to a modification  
 of the sequence consisting of amino acids 18 31 in  
 human lactoferrin

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> ACETYLATION

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> AMIDATION

<400> 53  
 Thr Lys Ala Phe Lys Trp Gln Arg Glu Met Arg Lys Val Arg  
     1                    5                    10

<210> 54  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to a modification  
 of the sequence consisting of aa 18 31 in human  
 lactoferrin; a lactam is formed between aa 5 and 9

<220>

# SEQListing.txt

<221> BINDING  
<222> (5)..(9)  
<223> LACTAM

<400> 54  
Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg  
1 5 10

<210> 55  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of aa 18 31 in human lactoferrin; a lactam is formed between aa 5 and 9

<220>  
<221> MOD\_RES  
<222> (1)  
<223> ACETYLATION

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<220>  
<221> BINDING  
<222> (5)..(9)  
<223> LACTAM

<400> 55  
Thr Lys Ala Phe Lys Trp Gln Arg Glu Met Arg Lys Val Arg  
1 5 10

<210> 56  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 56  
Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 57  
<211> 14  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

<400> 57

Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 58

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 58

Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg  
1 5 10

<210> 59

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

<400> 59

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Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg  
 1 5 10

<210> 60  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresp. to a modification of the seq. consisting of aa 18 31 in human lactoferrin; lactams formed between aa 3 and 7, and 9 and 13

<220>  
 <221> BINDING  
 <222> (3)..(7)  
 <223> LACTAM

<220>  
 <221> BINDING  
 <222> (9)..(13)  
 <223> LACTAM

<400> 60  
 Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg  
 1 5 10

<210> 61  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or artificial origin, corresp. to a modification of the seq. consisting of aa 18 31 in human lactoferrin; lactams formed between aa 3 and 7, and 9 and 13

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> ACETYLTATION

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> AMIDATION

<220>  
 <221> BINDING  
 <222> (3)..(7)  
 <223> LACTAM

<220>  
 <221> BINDING  
 <222> (9)..(13)  
 <223> LACTAM

SEQListing.txt

<400> 61  
 Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg  
     1                    5                    10

<210> 62  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
       artificial origin, corresponding to the sequence  
       consisting of amino acids 17 31 in human  
       lactoferrin

<400> 62  
 Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
     1                    5                    10                    15

<210> 63  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
       artificial origin, corresponding to a modification  
       of the sequence consisting of amino acids 17 31 in  
       human lactoferrin

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> ACETYLTATION

<220>  
 <221> MOD\_RES  
 <222> (15)  
 <223> AMIDATION

<400> 63  
 Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
     1                    5                    10                    15

<210> 64  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
       artificial origin, corresponding to the sequence  
       consisting of amino acids 16 31 in human  
       lactoferrin

SEQListing.txt

<400> 64  
 Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
     1                    5                    10                    15

<210> 65  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to a modification  
 of the sequence consisting of amino acids 16 31 in  
 human lactoferrin

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> ACETYLTATION

<220>  
 <221> MOD\_RES  
 <222> (16)  
 <223> AMIDATION

<400> 65  
 Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
     1                    5                    10                    15

<210> 66  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to the sequence  
 consisting of amino acids 15 31 in human  
 lactoferrin

<400> 66  
 Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val  
     1                    5                    10                    15

Arg

<210> 67  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: of natural or  
 artificial origin, corresponding to a modification  
 of the sequence consisting of amino acids 15 31 in  
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human lactoferrin

<220>  
<221> MOD\_RES  
<222> (1)  
<223> ACETYLATION

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 67  
Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val  
1 5 10 15

Arg

<210> 68  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been substituted

<400> 68  
Ala Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 69  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been substituted

<400> 69  
Cys Ala Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 70  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
Page 24



SEQListing.txt  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been substituted

<400> 70  
Cys Phe Ala Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 71  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been substituted

<400> 71  
Cys Phe Gln Ala Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 72  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been substituted

<400> 72  
Cys Phe Gln Trp Ala Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 73  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:of natural or  
artificial origin, corresponding to the sequence  
consisting of aa 20 31 in human lactoferrin  
wherein one aa has been modified

<400> 73  
Cys Phe Gln Trp Gln Ala Asn Met Arg Lys Val Arg  
1 5 10

<210> 74

SEQListing.txt

<211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 74  
 Cys Phe Gln Trp Gln Arg Ala Met Arg Lys Val Arg  
   1                  5                  10

<210> 75  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 75  
 Cys Phe Gln Trp Gln Arg Asn Ala Arg Lys Val Arg  
   1                  5                  10

<210> 76  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 76  
 Cys Phe Gln Trp Gln Arg Asn Met Ala Lys Val Arg  
   1                  5                  10

<210> 77  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 77

Cys Phe Gln Trp Gln Arg Asn Met Arg Ala Val Arg  
 1 5 10

<210> 78  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 78  
 Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Ala Arg  
 1 5 10

<210> 79  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 79  
 Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Ala  
 1 5 10

<210> 80  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 80  
 Cys Phe Gln Leu Gln Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 81  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 81

Cys Phe Gln Trp Gln Lys Asn Met Arg Lys Val Arg  
1 5 10

<210> 82

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 82

Cys Phe Gln Trp Gln Arg Asn Leu Arg Lys Val Arg  
1 5 10

<210> 83

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 83

Cys Phe Gln Trp Gln Arg Asn Met Lys Lys Val Arg  
1 5 10

<210> 84

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 84

Cys Phe Gln Trp Glu Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 85

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<211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 85  
 Cys Phe Gln Trp Gln Glu Asn Met Arg Lys Val Arg  
   1                  5                  10

<210> 86  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<400> 86  
 Cys Phe Gln Trp Gln Arg Glu Met Arg Lys Val Arg  
   1                  5                  10

<210> 87  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein one aa has been substituted

<220>  
 <221> MISC\_FEATURE  
 <222> (5)  
 <223> Amino acid 5 is Xaa wherein Xaa = Orn.

<400> 87  
 Cys Phe Gln Trp Xaa Arg Asn Met Arg Lys Val Arg  
   1                  5                  10

<210> 88  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC\_FEATURE

<222> (5)

<223> Amino acid 5 is Xaa wherein Xaa = Nle.

<400> 88

Cys Phe Gln Trp Xaa Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 89

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC\_FEATURE

<222> (7)

<223> Amino acid 7 is Xaa wherein Xaa = Orn.

<400> 89

Cys Phe Gln Trp Gln Arg Xaa Met Arg Lys Val Arg  
1 5 10

<210> 90

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC\_FEATURE

<222> (7)

<223> Amino acid 7 is Xaa wherein Xaa = Nle.

<400> 90

Cys Phe Gln Trp Gln Arg Xaa Met Arg Lys Val Arg  
1 5 10

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<210> 91  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 91  
 Cys Phe Gln Trp Lys Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 92  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or artificial origin, corresp. to a modification of the sequence consisting of aa 18 31 in human lactoferrin

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> ACETYLATION

<220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> AMIDATION

<220>  
 <221> BINDING  
 <222> (5)..(9)

<400> 92  
 Cys Phe Gln Trp Lys Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 93  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein some aa have been substituted

<400> 93

Cys Phe Gln Trp Lys Arg Ala Met Arg Lys Val Arg  
 1 5 10

<210> 94  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein some aa have been substituted

<400> 94  
 Cys Phe Ala Trp Lys Arg Asn Met Arg Lys Val Arg  
 1 5 10

<210> 95  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein some aa have been substituted

<400> 95  
 Cys Phe Ala Trp Gln Arg Ala Met Arg Lys Val Arg  
 1 5 10

<210> 96  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or  
 artificial origin, corresponding to the sequence  
 consisting of aa 20 31 in human lactoferrin  
 wherein some aa have been substituted

<400> 96  
 Cys Phe Gln Leu Lys Lys Asn Met Lys Lys Val Arg  
 1 5 10

<210> 97  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:of natural or



artificial origin, corresp. to a modification of  
the sequence consisting of aa 20 31 in human  
lactoferrin

<220>

<221> BINDING

<222> (5)..(9)

<400> 97

Cys Phe Ala Leu Lys Lys Ala Met Lys Lys Val Arg  
1 5 10

<210> 98

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or  
artificial origin, corresp. to a modification of  
the sequence consisting of aa 18 31 in human  
lactoferrin

<220>

<221> BINDING

<222> (5)..(9)

<220>

<221> MOD\_RES

<222> (1)

<223> ACETYLTATION

<220>

<221> MOD\_RES

<222> (14)

<223> AMIDATION

<400> 98

Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg  
1 5 10

<210> 99

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or  
artificial origin, corresp. to a modification of  
the sequence consisting of aa 20 31 in human  
lactoferrin

<220>

<221> PEPTIDE

<222> (3)

<223> Amino acid 3 is Xaa wherein Xaa = Gln or Ala.

<220>

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<221> PEPTIDE
<222> (4)
<223> Amino acid 4 is Xaa wherein Xaa = Trp or Leu.

<220>
<221> PEPTIDE
<222> (5)
<223> Amino acid 5 is Xaa wherein Xaa = Gln, Lys, Orn, Ala or Nle.

<220>
<221> PEPTIDE
<222> (6)
<223> Amino acid 6 is Xaa wherein Xaa = Arg, Lys or Ala.

<220>
<221> PEPTIDE
<222> (7)
<223> Amino acid 7 is Xaa wherein Xaa = Asn, Orn, Ala or Nle.

<220>
<221> PEPTIDE
<222> (8)
<223> Amino acid 8 is Xaa wherein Xaa = Met or Leu.

<220>
<221> PEPTIDE
<222> (9)
<223> Amino acid 9 is Xaa wherein Xaa = Arg or Lys.

<220>
<221> BINDING
<222> (5)..(9)

<400> 99
Cys Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Val Arg
 1             5             10

<210> 100
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:a fragment of
      human lactoferrin consisting of the amino acids in
      positions 12 40

<400> 100
Val Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met
 1             5             10             15
Arg Lys Val Arg Gly Pro Pro Val Ser Cys Ile Lys Arg
             20             25

<210> 101
<211> 9
<212> PRT
<213> Artificial Sequence

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SEQListing.txt

<220>

<223> of natural or artificial origin, corresponding to  
modification of the sequence consisting of amino  
acids 16 40 in human lactoferrin of SEQ ID NO. 2

<400> 101

Gly Pro Pro Val Ser Cys Ile Lys Arg  
1 5

<210> 102

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> of natural or artificial origin, not a  
modification of the sequence consisting of amino  
acids 18 31 in human lactoferrin of SEQ ID NO. 99

<400> 102

Glu Ala Thr Lys  
1